RTIP ID# *(required)* 0C2500

TCWG Consideration Date
8/25/2009

Project Description *(clearly describe project)*
The proposed action is a lane addition on Interstate 10 (I-10) in the San Bernardino Valley from Haven Avenue in the City of Ontario at post mile (PM) 8.00 (0.2 mile west of Haven Avenue) to post mile 33.80 (0.7 mile east of Ford Street) in the City of Redlands. The improvements consist of constructing one median High Occupancy Vehicle (HOV) lane in each direction of the freeway and auxiliary lanes between freeway ramps at various locations along the project area (see Attachment A-Project Location Map). A no-build (Alternative 1) and two build alternatives are being considered.

Alternative 2 (Full Standard Alternative)

Alternative 2 would provide an HOV lane in each direction of I-10 with a standard 10-foot inside shoulder and a standard 4-foot carpool lane buffer. This alternative includes the construction of a concrete median barrier, California Highway Patrol (CHP) enforcement areas, widening of some bridges, and reconstruction of some overcrossings to accommodate the carpool lane widening. Auxiliary lanes to facilitate movement of traffic entering and leaving the carpool and general purpose lanes at select locations are also proposed.

Alternative 3 (Reduced Standard Alternative)
This alternative is similar to the Full Standard Build Alternative, but proposes non-standard shoulder widths where constraints such as existing bridge columns do not allow a full standard shoulder. These non-standard shoulder widths would vary between 1 foot and 9 feet.

Due to the length of this project, it is believed that it would be more manageable to construct in 5 phases rather than as a single construction package. Each segment of the project would range from 2 to 9.5 miles in length. Within each segment, the following work will be completed: Modifying the mainline, ramps and median to construct an HOV lane, replace existing fence and post type median barriers with concrete median barriers, adding California Highway Patrol (CHP) enforcement areas, retaining walls, adding auxiliary lanes at selected locations, building drainage facilities, and reconstructing bridges and culverts to accommodate the roadway widening. It is anticipated that all of the proposed roadway and bridge construction will be done within existing state and/or city rights-of-way with exception of several temporary construction easements that may be required for some proposed retaining wall construction.

Type of Project *(use Table 1 on instruction sheet)*
Change to existing state highway

County	**Narrative Location/Route & Postmiles**
San Bernardino	I10-HOV lane Addition-From Haven Ontario to Ford Street (REDLANDS)-Widening from 8-10 Lanes, Aux Lanes Widening Undercrossings and Overcrossing and Reconstruction of Ramps where needed. Currently, the RTIP lists the limits from PM 8.20 to PM 33.43. However, the project limits have been extended to accommodate all project features and are proposed as: west of Haven Avenue (PM 8.00) to east of Redlands Blvd (PM 33.80). The project limits will be updated in an amendment to the 2008 RTIP. **Caltrans Projects – EA#** 0C250

Lead Agency: California Department of Transportation (District 8)

Contact Person	**Phone#**	**Fax#**	**Email**
Dr. Paul Fagan	(909) 383-5902	909) 383-6938	Paul.Fagan@dot.ca.gov

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5 x** **PM10 x**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)		**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**
	X				

Scheduled Date of Federal Action: October 25, 2010

NEPA Delegation – Project Type *(check appropriate box)*

Exempt	**Section 6004 –Categorical Exemption**		**Section 6005 – Non-Categorical Exemption**
		X	

Current Programming Dates *(as appropriate)*

	PE/Environmental	ENG	ROW	CON
Start	January 2007	October 2010	January 2011	July 2014
End	October 2010	June 2014	June 2014	January 2019

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*
(See Attachment B- Purpose and Need Summary)

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*
On the western portion project corridor between Haven Avenue to I-215, (within the cities of Ontario, Fontana, Rialto, and Colton) the land uses identified as the largest attractors of heavy duty diesel trucks are the Union Pacific Railroad (UPRR) Colton Railyard (located within the community of Bloomington and City of Colton) and the BNSF Railway Company (BNSF) San Bernardino Railyard (located within the City of San Bernardino). The UPRR Railyard extends along the southern edge of the corridor from Sierra Avenue in the west to North Rancho Avenue in the east. The corresponding Post Miles (PM) are 16.2 to 22.0, and the corresponding Project Station Numbers (STNs) are 605+00 to 908+00. The BNSF Railyard is about two miles north of the project corridor. To the extent that truck trips accessing the BNSF Railyard utilize segments of I-10 within the project corridor, they would most likely enter or exit I-10 via I-215. The I-10/I-215 Interchange is located at I-10 PM 24.2. The corresponding STN is 1121+00..

A California Air Resources Board (ARB) study estimates that the BNSF San Bernardino Railyard attracts approximately 620,000 heavy-duty truck trips per year, which corresponds to about 1,700 truck trips per annual-average day. The corresponding ARB study for the Colton Railyard does not estimate total on-road heavy-duty truck trip attraction. However, a comparison of the relevant studies suggests that about one quarter as much locomotive activity occurs at the UPRR Colton Railyard. If this is the case, and if on-road heavy-duty truck trip attraction is generally proportional to locomotive activity, then the UPRR Colton Railyard generates about 155,000 heavy-duty truck trips per year or about 425 truck trips per annual-average day.

Substantial portions of the project corridor are bordered by industrial land use. As a result, other, lesser generators/attractors of heavy-duty truck trips are also located along or near the project corridor. For some of those uses, some of the heavy-duty truck trips they generate or attract could be coming from or heading towards one of the aforementioned railyards. Such trips would not be independent of railyard trip generation/attraction, and would therefore be accounted for in railyard trip generation/attraction estimates.

On the eastern portion of the project between I-215 to Ford Street (within the cities of San Bernardino, Loma Linda and Redlands), land uses adjacent to the I-10 include commercial, residential, and mixed use. It is not likely that this portion of the project contributes significantly to the diesel traffic along I-10.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 1

AADT – Opening Year (2018)

Study Segment Between	No Build			Build		
	Total AADT	Heavy Truck AADT	Heavy Truck % of Total AADT	Total AADT	Heavy Truck AADT	Heavy Truck % of Total AADT
Milliken Ave. to Haven Ave.	291,000	17,460	6	291,000	17,460	6
I-15 to Milliken Ave.	288,000	17,280	6	288,000	17,280	6
Etiwanda Ave. to I-15	283,000	16,980	6	283,000	16,980	6
Cherry Ave. to Etiwanda Ave.	261,000	15,660	6	261,000	15,660	6
Beech Ave. to Cherry Ave.	263,000	15,780	6	263,000	15,780	6
Citrus Ave. to Beech Ave.	261,000	15,660	6	261,000	15,660	6
Sierra Ave. to Citrus Ave.	266,000	15,960	6	266,000	15,960	6
Alder Ave. to Sierra Ave.	261,000	15,660	6	261,000	15,660	6
Cedar Ave. to Alder Ave.	262,000	15,720	6	262,000	15,720	6
Riverside Ave. to Cedar Ave.	264,000	15,840	6	264,000	15,840	6
Pepper Ave. to Riverside Ave.	264,000	15840	6	264,000	15840	6
Rancho Ave. to Pepper Ave.	262,000	15,720	6	262,000	15,720	6
La Cadena Dr. to Rancho Ave.	261,000	15,660	6	261,000	15,660	6
9th St. to La Cadena Dr.	256,000	15,360	6	256,000	15,360	6
Mt. Vernon Ave. to 9th St	n/a	n/a	n/a	n/a	n/a	n/a
Sperry Ave. to Mt. Vernon Ave.	258,000	15,480	6	258,000	15,480	6
I-215 to Sperry Ave.	259,000	15,540	6	259,000	15,540	6
Carnegie Dr. to I-215	n/a	n/a	n/a	n/a	n/a	n/a
Tippecanoe Ave. to Carnegie Dr.	277,000	16,620	6	277,000	16,620	6
Mountain View Ave. to Tippecanoe Ave.	275,000	16,500	6	275,000	16,500	6
California St. to Mountain View Ave.	265,000	15,900	6	265,000	15,900	6
Alabama St. to California St.	257,000	15,420	6	257,000	15,420	6
SR-210/Tennessee St. to Alabama St.	229,000	13,740	6	229,000	13,740	6
Orange St. to SR-210/Tennessee St.	241,000	14,460	6	241,000	14,460	6
6th St. to Orange St.	209,000	12,540	6	209,000	12,540	6
University Dr. to 6th St.	223,000	13,380	6	223,000	13,380	6
Cypress Ave. to University Dr.	204,000	12,240	6	204,000	12,240	6
Ford St. to Cypress Ave.	210,000	12,600	6	210,000	12,600	6

SOURCE: Parsons; Kimley-Horn and Associates, Inc.'s *Traffic Operational Analysis Technical Report, Draft Report: EA 08-0C2500, Post Miles 8.20 to 33.43: Interstate 10 HOV Lane Addition: Haven Avenue to Ford Street*, July 2009.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 2

Peak Hour LOS - Opening Year (2018)

Study Segment Between	No Build				Build			
	AM		PM		AM		PM	
	EB	WB	EB	WB	EB	WB	EB	WB
Milliken Ave. to Haven Ave.	F	F	F	F	E	E	E	F
I-15 to Milliken Ave.	F	F	F	F	E	E	E	F
Etiwanda Ave. to I-15	F	E	E	F	F	D	E	E
Cherry Ave. to Etiwanda Ave.	F	D	E	E	E	D	E	E
Beech Ave. to Cherry Ave.	F	D	E	E	E	D	E	E
Citrus Ave. to Beech Ave.	F	D	E	E	E	D	E	E
Sierra Ave. to Citrus Ave.	F	D	E	F	F	D	E	E
Alder Ave. to Sierra Ave.	F	E	E	E	F	D	D	E
Cedar Ave. to Alder Ave.	F	E	E	E	F	D	D	E
Riverside Ave. to Cedar Ave.	F	D	E	F	F	D	D	E
Pepper Ave. to Riverside Ave.	F	D	E	E	F	D	E	E
Rancho Ave. to Pepper Ave.	F	D	E	F	F	D	E	E
La Cadena Dr. to Rancho Ave.	N/A	D	N/A	E	N/A	D	N/A	E
9th St. to La Cadena Dr.	N/A	D	N/A	E	N/A	D	N/A	D
Mt. Vernon Ave. to 9th St	F	D	E	F	F	D	E	E
Sperry Ave. to Mt. Vernon Ave.	N/A	D	N/A	E	N/A	D	N/A	D
I-215 to Sperry Ave.	N/A	D	N/A	E	N/A	D	N/A	E
Carnegie Dr. to I-215	N/A	E	N/A	F	N/A	E	N/A	E
Tippecanoe Ave. to Carnegie Dr.	N/A	F	N/A	F	N/A	E	N/A	E
Mountain View Ave. to Tippecanoe Ave.	E	F	F	F	D	F	F	E
California St. to Mountain View Ave.	D	F	F	E	D	F	E	D
Alabama St. to California St.	D	F	F	E	C	F	E	D
SR-210/Tennessee St. to Alabama St.	C	F	E	D	C	E	D	D
Orange St. to SR-210/Tennessee St.	D	F	E	D	C	E	D	D
6th St. to Orange St.	C	D	E	D	C	D	D	C
University Dr. to 6th St.	C	E	F	D	C	D	E	D
Cypress Ave. to University Dr.	C	D	E	D	C	C	D	C
Ford St. to Cypress Ave.	C	D	E	D	C	C	E	C

SOURCE: Parsons; Kimley-Horn and Associates, Inc.'s *Traffic Operational Analysis Technical Report, Draft Report: EA 08-0C2500, Post Miles 8.20 to 33.43: Interstate 10 HOV Lane Addition: Haven Avenue to Ford Street*, July 2009.

NOTE: The project improves LOS slightly and does not increase the percent of trucks that utilize the corridor.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility (continued)

Table 1

AADT – 2040

Study Segment Between	No Build			Build		
	Total AADT	Heavy Truck AADT	Heavy Truck % of Total AADT	Total AADT	Heavy Truck AADT	Heavy Truck % of Total AADT
Haven Ave. and Milliken Ave.	349000	20940	6%	362000	21720	6%
Milliken Ave. and I-15	344000	20640	6%	362000	21720	6%
I-15 and Etiwanda Ave.	324000	19440	6%	345000	20700	6%
Etiwanda Ave. and Cherry Ave.	307000	18420	6%	328000	19680	6%
Cherry Ave. and Beech Ave.	313000	18780	6%	336000	20160	6%
Beech Ave. and Citrus Ave.	307000	18420	6%	331000	19860	6%
Citrus Ave. and Sierra Ave.	318000	19080	6%	342000	20520	6%
Sierra Ave and Alder Ave.	319000	19140	6%	344000	20640	6%
Alder Ave. and Cedar Ave.	324000	19440	6%	349000	20940	6%
Cedar Ave. and Riverside Ave.	324000	19440	6%	345000	20700	6%
Riverside Ave. and Pepper Ave.	326000	19560	6%	348000	20880	6%
Pepper Ave. and Rancho Ave.	324000	19440	6%	345000	20700	6%
Rancho Ave. and La Cadena Dr.	312000	18720	6%	334000	20040	6%
La Cadena Dr. and 9th St.	306000	18360	6%	328000	19680	6%
9th St. and Mt. Vernon Ave.	321000	19260	6%	343000	20580	6%
Mt. Vernon Ave. and Sperry Dr.	305000	18300	6%	336000	20160	6%
Sperry Dr. and I-215	321000	19260	6%	341000	20460	6%
I-215 and Club Center Dr.	355000	21300	6%	376000	22560	6%
Club Center Dr. and Waterman Ave.	358000	21480	6%	379000	22740	6%
Waterman Ave. and Carnegie Dr.	354000	21240	6%	377000	22620	6%
Carnegie Dr. and Tippecanoe Ave.	356000	21360	6%	380000	22800	6%
Tippecanoe Ave and Mountain View	358000	21480	6%	378000	22680	6%
Mountain View Ave. and California St.	335000	20100	6%	355000	21300	6%
California St. and Alabama St.	325000	19500	6%	344000	20640	6%
Alabama St. and SR-210/Tennessee St.	287000	17220	6%	305000	18300	6%
SR-210/Tennessee St. and Eureka St.	313000	18780	6%	328000	19680	6%
Eureka St. and Orange St.	296000	17760	6%	311000	18660	6%
Orange St. and 6th St.	279000	16740	6%	295000	17700	6%
6th St. and University Dr.	298000	17880	6%	313000	18780	6%
University Dr. and Cypress Ave.	280000	16800	6%	293000	17580	6%
Cypress Ave. and Ford St.	288000	17280	6%	299000	17940	6%

SOURCE: Parsons; Kimley-Horn and Associates, Inc.'s *Traffic Operational Analysis Technical Report, Draft Report: EA 08-0C2500, Post Miles 8.20 to 33.43: Interstate 10 HOV Lane Addition: Haven Avenue to Ford Street*, July 2009.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility (continued)

Table 2

Peak Hour LOS - 2040

Study Segment Between	No Build				Build			
	AM		PM		AM		PM	
	EB	WB	EB	WB	EB	WB	EB	WB
Milliken Ave. to Haven Ave.	E	F	D	F	D	D	C	F
I-15 to Milliken Ave.	E	E	D	F	D	E	D	F
Etiwanda Ave. to I-15	F	D	D	F	F	D	D	F
Cherry Ave. to Etiwanda Ave.	F	E	F	F	F	E	F	F
Beech Ave. to Cherry Ave.	F	F	F	F	F	F	F	F
Citrus Ave. to Beech Ave.	F	F	F	F	F	E	F	F
Sierra Ave. to Citrus Ave.	F	D	D	F	F	D	D	F
Alder Ave. to Sierra Ave.	F	F	F	F	F	F	F	F
Cedar Ave. to Alder Ave.	F	F	F	F	F	F	F	F
Riverside Ave. to Cedar Ave.	F	F	F	F	F	E	F	F
Pepper Ave. to Riverside Ave.	F	F	F	F	F	E	F	F
Rancho Ave. to Pepper Ave.	F	F	F	F	F	E	F	F
La Cadena Dr. to Rancho Ave.	N/A	F	N/A	F	N/A	E	N/A	F
9th St. to La Cadena Dr.	N/A	F	N/A	F	N/A	E	N/A	F
Mt. Vernon Ave. to 9th St	F	D	F	F	F	D	E	F
Sperry Ave. to Mt. Vernon Ave.	N/A	D	N/A	F	N/A	D	N/A	E
I-215 to Sperry Ave.	N/A	D	N/A	F	N/A	D	N/A	F
Carnegie Dr. to I-215	N/A	F	N/A	F	N/A	F	N/A	F
Tippecanoe Ave. to Carnegie Dr.	N/A	F	N/A	F	N/A	F	N/A	E
Mountain View Ave. to Tippecanoe Ave.	F	F	F	F	F	F	F	F
California St. to Mountain View Ave.	F	F	F	F	E	F	F	F
Alabama St. to California St.	D	F	F	E	C	F	E	D
SR-210/Tennessee St. to Alabama St.	D	F	F	F	D	F	F	E
Orange St. to SR-210/Tennessee St.	E	F	F	F	D	F	F	E
6th St. to Orange St.	D	F	F	F	D	F	F	E
University Dr. to 6th St.	F	F	F	F	D	F	F	E
Cypress Ave. to University Dr.	D	F	F	F	D	F	F	E
Ford St. to Cypress Ave.	D	F	F	F	D	F	F	E

SOURCE: Parsons; Kimley-Horn and Associates, Inc.'s *Traffic Operational Analysis Technical Report, Draft Report: EA 08-0C2500, Post Miles 8.20 to 33.43: Interstate 10 HOV Lane Addition: Haven Avenue to Ford Street*, July 2009.

NOTE: The project improves LOS slightly and does not increase the percent of trucks that utilize the corridor.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not applicable. (Selected interchange improvements within corridor are being addressed as separate projects.)

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Not applicable. (Selected interchange improvements within corridor are being addressed as separate projects.)

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*
During the opening year, the I-10 HOV lane addition project may redistribute carpool and transit traffic from parallel facilities (i.e. SR 210 and SR 60) and local streets onto the I-10 corridor. This may result in some traffic redistribution from parallel facilities and local streets. However, most users of HOV lanes will likely commute between San Bernardino County and Los Angeles County and will not be diverted to local streets/other facilities. Operations and safety of the I-10 corridor is expected to be improved with the build alternatives. In addition, the HOV project will provide a benefit to carpool/transit commuters by separating the HOV traffic from goods movement (trucks) and single occupancy vehicle user traffic.

With the addition of the HOV lane addition, carpoolers and transit vehicles may be moved from the general purpose lanes, leaving more capacity for diesel vehicles. The project may result in an increase in diesel vehicle traffic.

During construction of the project, some traffic delays could occur; however, the traffic impacts from construction will only be temporary in nature and will cease upon completion of construction activities.

Comments/Explanation/Details *(attach additional sheets as necessary)*
The addition of an HOV lane in the eastbound and westbound directions will result in an increase in person carrying capacity. The redistribution of traffic will result from HOV users begin to use the I-10 for carpooling/transit from Los Angeles County. With HOV users moving into a designated lane, then there maybe additional capacity on the mixed flow lanes for diesel trucks to use. The I-10 will have over the 125,000 ADT, in both the opening and design years and it is likely that there is going to be an increase in diesel trucks utilizing the corridor. Therefore, the project may be considered a project of air quality concern and a qualitative PM 2.5 and PM 10 analysis will be completed for the project.